

*What Is Claimed Is:*

1           1. An electrolytic capacitor comprising:  
2           a cathode foil;  
3           a powered anode foil;  
4           a floating anode foil;  
5           a plurality of separator layers positioned between said cathode foil,  
6           said powered anode foil and said floating anode foil; and  
7           an electrolyte;  
8           wherein said floating anode foil is disposed between said cathode foil  
9           and said powered anode foil.

1           2. An electrolytic capacitor according to claim 1, wherein a plurality of  
2           powered anode foils, floating anode foils, cathode foils and separator layers are  
3           stacked together to form a layered structure with said powered anode foils  
4           electrically coupled together, said floating anode foils electrically coupled  
5           together and said cathode foils electrically coupled together.

1           3. The capacitor of claim 2, further comprising  
2           a housing for enclosing said layered structure and said electrolyte;  
3           an anode electrical contact extending from said coupled powered anode  
4           foils to outside said housing; and  
5           a cathode electrical contact extending from said coupled cathode foils to  
6           outside said housing.

1           4. An electrolytic capacitor according to claim 1, wherein said powered  
2           anode foil, said floating anode foil, said cathode foil and said separator layers are  
3           rolled up together into the form of a substantially cylindrical wound roll.

1           5. The capacitor of claim 4, further comprising  
2           a housing for enclosing said wound roll and said electrolyte;

3 an anode electrical contact extending from said powered anode foil to  
4 outside said housing; and

5 a cathode electrical contact extending from said cathode foil to outside  
6 said housing.

1 6. An electrolytic capacitor according to claim 1, wherein said powered  
2 anode foil, said floating anode foil and said cathode foil are aluminum.

1 7. An electrolytic capacitor according to claim 1, wherein said separators  
2 are impregnated with said electrolyte.

1 8. A process for making an electrolytic capacitor comprising the steps  
2 of:

3 providing a thin metallic powered anode foil and a thin metallic floating  
4 anode foil;

5 etching said powered anode foil and said floating anode foil to provide  
6 enhanced surface area;

7 forming an oxide layer on said powered anode foil and said floating anode  
8 foil;

9 providing a plurality of separators and a thin metallic cathode foil; and

10 rolling said anode foils, said cathode foil and said separators into a  
11 substantially cylindrical wound roll such that said floating anode plate is disposed  
12 between said cathode plate and said powered anode plate and said separators are  
13 disposed therebetween.

1 9. The method of claim 8, further including enclosing the assembly in  
2 a housing.

1 10. The method of claim 8, further including the step of impregnating  
2 said capacitor with an electrolyte.

1           11. A process for making an electrolytic capacitor comprising the  
2 steps of:

3           providing a first thin metallic anodic foil and a second thin metallic  
4 anodic foil;

5           etching said first anodic foil and said second anodic foil to provide  
6 enhanced surface area;

7           forming an oxide layer on said first anodic foil and said second anodic  
8 foil;

9           cutting and removing a powered anode plate from said first anodic foil  
10 and cutting and removing a floating anode plate from said second anodic foil;

11           providing a plurality of separators and a cathode plate; and

12           stacking said plates and separators such that said floating anode plate is  
13 disposed between said cathode plate and said powered anode plate and said  
14 separators are disposed therebetween.

15           12. The method of claim 11, further including enclosing the assembly  
16 in a housing.

17           13. The method of claim 11, further including the step of impregnating  
18 said capacitor with an electrolyte.

19           14. An Implantable Cardioverter Defibrillator (ICD) comprising an  
20 electrolytic capacitor comprising:

21           a cathode foil;

22           a powered anode foil;

23           a floating anode foil;

24           a plurality of separator layers positioned between said cathode foil,  
25 said powered anode foil and said floating anode foil; and

26           an electrolyte;

27           wherein said floating anode foil is disposed between said cathode foil  
28 and said powered anode foil.